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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,784	03/10/2004	Anant Achyut Setlur	GLOZ 2 00169 (RD29342)	4139
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FAY SHARPE LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			EXAMINER MONDT, JOHANNES P	
			ART UNIT 3663	PAPER NUMBER
			MAIL DATE 07/03/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/797,784	Applicant(s) SETLUR ET AL.	
	Examiner JOHANNES P. MONDT	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34, 37-43, 45 and 46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-34 and 37-39 is/are allowed.
- 6) ☒ Claim(s) 1-8, 12-21, 25, 26, 40, 43, 45 and 46 is/are rejected.
- 7) ☒ Claim(s) 9-11, 22-24, 41 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In view of the Appeal Brief filed on 4/7/08, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Jack W. Keith/

Supervisory Patent Examiner, Art Unit 3663

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claim 38** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. In particular, the removal altogether of $\text{Mg}_4\text{FgeO}_6\text{:Mn}^{4+}$ constitutes a broadening of a range not supported by the original specification including original claims, and hence constitutes new matter.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-3, 5-8, 12-16, 18-21, 25-26, 40, 43, 45 and 46** are rejected under 35 U.S.C. 102(b) as being anticipated by Bokor et al (WO 02/11214) (cited and made of record previously; family member USPAT 7,064,480 B2 used as translation).

On claim 1: Bokor et al teach a lighting apparatus 20 capable of emitting white light (col. 2, l. 15-17 and col. 6, l. 16+), comprising: a semiconductor light source 1 (col. 5, l. 52+) emitting radiation having a peak emission in the UV (see Abstract: peak

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wavelength is any in the range 370 - 430 nm, and at least 370 nm is in the UV range);
and

a phosphor composition 6 radiationally coupled to the light source (see col. 2, l. 15-26 and col. 5, l. 52 – col. 6, l. 15; see Figure 1), the phosphor composition comprising $(\text{Sr}, \text{Ba}, \text{Ca})_2\text{SiO}_4:\text{Eu}$ (in particular: green phosphor $\text{SrBaSiO}_4:\text{Eu}^{2+}$, see Table 2, col. 4, l. 45), and at least one phosphor selected from the claimed group, in particular: $\text{M}_5(\text{PO}_4)_3\text{X}:\text{Eu}^{2+}$ with M at least one of Ba, Ca alone or in combination with Sr, and X being at least one of F and Cl (see Table 1, col. 4, lines 5-9) (see col. 2, l. 61 – col. 3, l. 11).

Furthermore, Bokor et al also teach (col. 3, l. 4-11) that it is possible to combine their phosphor composition with other phosphors already known for this use, specifically teaching $\text{YAG}:\text{Ce} = \text{Y}_3\text{Al}_5\text{O}_{12}:\text{Ce}$ for meeting particularly high demands imposed on color rendering (col. 3, l. 4-11) (N.B.: see Shimizu et al (5,998,925) to which Bokor et al refer for a definition of $\text{YAG}:\text{Ce}$ by chemical composition (especially: see Shimizu et al, col. 11, l. 26+ for the definition of the chemical composition referred to as YAG).

(Examiner Note: Shimizu et al is only referred to here for establishing the facts on what Bokor et al teach, not for any actual teaching by Shimizu et al themselves). Therefore, Bokor et al also teach the one or more garnet phosphors as claimed.

On claim 2: the light source 1 is an LED (see col. 2, l. 15+ and col. 5, l. 52+).

On claim 3: the LED comprises a nitride compound semiconductor represented by the formula as claimed (col. 3, l. 12-15).

On claim 5: the phosphor composition is a coating 6 on the surface of the light source 1 (col. 5, l. 52 – col. 6, l. 15). Whether the act of coating is involved in the method of making is a product-by-process limitation. The limitation is only of patentable weight in as much as the method steps distinguish the final structure, and to the extent not impacting final structure are taken to be product-by-process limitations and non-limiting. A product by process claim is directed to the product per se, no matter how they are actually made. See *In re Fessman*, 180 USPQ 324, 326 (CCPA 1974); *In re Marosi et al*, 218 USPQ 289, 292 (Fed. Cir. 1983), and *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make clear that it is the patentability of the final structure of the product “gleaned” from the process steps that must be determined in a “product-by-process” claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not.

On claim 6: the lighting apparatus further comprises an encapsulant (epoxy casting resin in potting compound 5) surrounding the light source and the phosphor composition (col. 5, l. 52 – col. 6, l. 15 and Figure 1).

On claim 7: the phosphor composition 6 is dispersed in the encapsulant (epoxy resin in 5) (col. 5, l. 52 - col. 6, l. 15, especially col. 6, l. 5-9).

On claim 8: the lighting apparatus further comprises a reflector cup (recess with wall 17: (col. 6, l. 5-6) and Figure 1).

On claim 12: the phosphor composition further comprises one or more additional phosphor (any of the red phosphors of Table 3, cols. 4-5).

On claim 13: said one or more additional phosphors are selected from the group as claimed, namely: $\text{Ln}_2\text{W}_m\text{O}_6:\text{Ak}^{3+}$, wherein Ln is at least one of the metals Y, Gd, La, Lu; where W_m is at least one of the elements W, Mo, Te; and where Ak=Eu alone or in combination with Bi; namely: Ln= Y, Lu or a combination thereof; $\text{W}_m = \text{W}$, and Ak=Eu (see col. 5, l. 5-7 of Table 3).

On claim 14: Bokor et al teach a light-emitting apparatus 20 capable of emitting white light comprising:

a UV light source 1 (col. 5, l. 52+ and Figure 1) emitting radiation having a peak emission in the UV range (see Abstract) and a phosphor composition 6 (col. 5, l. 52 – col. 6, l. 15) radiatively coupled to the light source, the phosphor composition comprising $(\text{Sr},\text{Ba},\text{Ca})_2\text{SiO}_4:\text{Eu}$ (see Table 2, col. 4, l. 45), namely $\text{SrBaSiO}_4:\text{Eu}^{2+}$, and a magnesium fluorogermanate (see Table 3, col. 5, line 9), namely:
 $\text{Mg}_{28}\text{Ge}_{7.5}\text{O}_{38}\text{F}_{10}:\text{Mn}^{4+}$.

Furthermore, Bokor et al also teach (col. 3, l. 4-11) that it is possible to combine their phosphor composition with other phosphors already known for this use, specifically teaching $\text{YAG}:\text{Ce} = \text{Y}_3\text{Al}_5\text{O}_{12}:\text{Ce}$ for meeting particularly high demands imposed on color rendering (col. 3, l. 4-11) (N.B.: see Shimizu et al (5,998,925) to which Bokor et al refer for a definition of $\text{YAG}:\text{Ce}$ by chemical composition (especially: see Shimizu et al, col. 11, l. 26+ for the definition of the chemical composition referred to as YAG)
(Examiner Note: Shimizu et al is only referred to here for establishing the facts on what

Bokor et al teach, not for any actual teaching by Shimizu et al themselves). Therefore, Bokor et al also teach the one or more garnet phosphors as claimed.

On claim 15: the light source 1 is a semiconductor LED (see col. 2, l. 15+ and col. 5, l. 52+).

On claim 16: the LED comprises a nitride compound semiconductor represented by the formula as claimed (col. 3, l. 12-15).

On claim 18: the phosphor composition is a coating 6 on the surface of the light source 1 (col. 5, l. 52 – col. 6, l. 15). Whether the act of coating is involved in the method of making is a product-by-process limitation. The limitation is only of patentable weight in as much as the method steps distinguish the final structure, and to the extent not impacting final structure are taken to be product-by-process limitations and non-limiting. A product by process claim is directed to the product per se, no matter how they are actually made. See *In re Fessman*, 180 USPQ 324, 326 (CCPA 1974); *In re Marosi et al*, 218 USPQ 289, 292 (Fed. Cir. 1983), and *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make clear that it is the patentability of the final structure of the product “gleaned” from the process steps that must be determined in a “product-by-process” claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not.

On claim 19: the lighting apparatus further comprises an encapsulant (epoxy casting resin in potting compound 5) surrounding the light source and the phosphor composition (col. 5, l. 52 – col. 6, l. 15 and Figure 1)

On claim 20: the phosphor composition 6 is dispersed in the encapsulant (epoxy resin in 5) (col. 5, l. 52 - col. 6, l. 15, especially col. 6, l. 5-9).

On claim 21: the lighting apparatus further comprises a reflector cup (recess with wall 17: (col. 6, l. 5-6) and Figure 1).

On claim 25: the phosphor composition further comprises one or more additional phosphor, i.e., any of the red phosphors of Table 3, cols. 4-5, other than the magnesium fluorogermanate described on line 9 of col. 5).

On claim 26: said one or more additional phosphors are selected from the group as claimed, e.g.: $\text{Ln}_2\text{WmO}_6:\text{Ak}^{3+}$, wherein Ln is at least one of the metals Y, Gd, La, Lu; where Wm is at least one of the elements W, Mo, Te; and where Ak=Eu alone or in combination with Bi; namely: Ln= Y, Lu or a combination thereof; Wm = W, and Ak=Eu (see col. 5, l. 5-7 of Table 3).

On claim 40: Bokor et al teach a phosphor blend including $(\text{Sr,Ba,Ca})_2\text{SiO}_4:\text{Eu}$, in particular: $\text{SrBaSiO}_4:\text{Eu}^{2+}$: see Table 2, col. 4, l. 45) and at least one of the other phosphors recited in claim 40, particularly: $\text{Sr}_2\text{P}_2\text{O}_7:\text{Eu}^{2+}$ (see Table 2, col. 4, l. 55; which meets the first of said recited at least one of said phosphors); also $\text{M}_5(\text{PO}_4)_3\text{X}:\text{Eu}^{2+}$ with M at least one of Ba, Ca alone or in combination with Sr, and X being at least one of F and Cl (see Table 1, col. 4, lines 5-9) (see col. 2, l. 61 – col. 3, l. 11) (meeting the second of said at least one of the phosphors as recited); and also $(\text{Ba,Sr})\text{MgAl}_{10}\text{O}_{17}:\text{Ak}$ (see Table 2, line 52), wherein Ak= Eu^{2+} alone or in combination with Mn^{2+} , thus meeting the third one of the recited “at least” one other phosphor.

On claim 43: said phosphor blend meeting claim 40 is capable of absorbing the radiation emitted by a light source having as peak emission in the UV range (see Abstract: peak wavelength can be as low as 370 nm or 405 nm, which is solidly in the UV range) and emitting radiation that, when combined with said radiation from said light source, produces white light (see col. 2, l. 15-34, col. 2, l. 61+).

On claim 45: said semiconductor light source meeting claim 1 has a peak emission of about 405 nm, namely between 370 nm and 430 nm (see Abstract).

On claim 46: Bokor et al teach a lighting apparatus 20 (col. 6, l. 20+ and Figure 2) capable of emitting white light comprising: a semiconductor light source 1 (col. 5, l. 52+ and Figures 1 and 2) emitting radiation having a peak wavelength in the UV (see Abstract and col. 2, l. 15+, col. 2, l. 61+, col. 3, l. 28+, col. 3, l. 47+ and col. 3, l. 55+); and a phosphor composition 6 (col. 5, l. 52 – col. 6, l. 15) radiationally coupled to the light source (Abstract, col. 6, l. 9), the phosphor composition comprising (Sr,Ba,Ca)₂SiO₄:Eu (in particular: SrBaSiO₄:Eu²⁺: see Table 2, col. 4, in particular col. 4, l. 45), and at least one phosphor selected from the recited group, particularly: Sr₂P₂O₇:Eu²⁺ (see Table 2, col. 4, l. 55; which meets the first of said recited at least one of said phosphors); also M₅(PO₄)₃X:Eu²⁺ with M at least one of Ba, Ca alone or in combination with Sr, and X being at least one of F and Cl (see Table 1, col. 4, lines 5-9) (see col. 2, l. 61 – col. 3, l. 11) (meeting the second of said at least one of the phosphors as recited); and also (Ba,Sr)MgAl₁₀O₁₇:Ak (see Table 2, line 52), wherein Ak=Eu²⁺ alone or in combination with Mn²⁺ (meeting the third one of the recited “at least” one other phosphor.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. ***Claims 4 and 17*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bokor et al as applied to claims 1 and 14 above, in view of Zou et al (Applied Physics Letters 79(14), 2282-2284). As detailed above, Bokor et al anticipate claims 1 and 14. Bokor et al do not necessarily teach the light source to be an organic emissive structure. However, it would have been obvious to teach said organic emissive structure as embodiment for the light source in view of Zou et al, who, in a publication on light-emitting diodes, disclose an organic light-emitting diode (OLED) with a peak wavelength in the UV range of about 380 nm (see Figure 2 on p. 2283), i.e., a peak wavelength quite close to that of the LED devices by Bokor et al (see Figures 6-12, e.g.). Because white light can be constructed as the composite of red, blue and green phosphors as witnessed by Bokor et al, it would have been obvious to combine the technique of

creating white light by Bokor et al with the organic light-emitting diode invention by Zou et al, thus enlarging the field of application of the invention by Bokor et al. Because light interaction with phosphors is defined by intensity and wavelength independent of the specific origin of the light one of ordinary skill in the art would expect success of said combination. The claim would also have been obvious because the technique for improving a particular class of devices (UV-emitting OLEDs, the improvement being their application to produce white light) was part of the ordinary capabilities of a person of ordinary skill in the art, in view of the teaching of the technique for improvement in other situations (specifically, the improvement of GaN-based semiconductor LED diode light sources so as to produce white light as desired).

Response to Arguments

8. Applicant's arguments, see Appeal Brief, filed 4/7/08, with respect to the rejection(s) of claims under 35 U.S.C. 112 and 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration of one of the cited references, in particular Bokor et al, a new ground of rejection is made in view of said cited reference, now with Bokor et al (7,064,480 B2) as translation for the German Language Patent Document, i.e., Bokor et al (WO02/11214 A1), because further consideration has revealed that Bokor et al do teach a phosphor composition including one or more of the claimed garnet phosphors, - counter to examiner's initial finding, through a reference to Shimizu et al, as explained in the rejection under 35 USC 102(b) above.

9. With regard to Applicant's contention that Bokor et al do not recite (Sr,Ba,Ca)₂SiO₄:Eu on the seventh line of page 6, Bokor et al (WO 02/11214 A1) do recite said (Sr,Ba,Ca)₂SiO₄:Eu on page 7, line 16. Counter to Applicant's statement Bokor et al (WO 02/11214 A1) does have a ninth page. The magnesium fluoro-germanate is disclosed on page 8, line 13 of the original (WO 02/11214 A1) document, with regrets by examiner on the confusion. To avoid further confusion between references to the original document and the document used for translation, examiner herewith cites the patent family member Bokor et al (7,064,480 B2) for the purpose of translation from the German, instead of the US published patent application Bokor et al (US 2004/0056256 A1) in the present office action.

Those rejections not included in the instant Office Action have been withdrawn based on Appellant's arguments.

Allowable Subject Matter

1. ***Claims 27-34, 37 and 39*** are allowed. The following is a statement of reasons for the indication of allowable subject matter: strictly within the context of the invention as recited in independent claim 27, the phosphor as otherwise claimed, specifically comprising either Sr_{0.95}Ba_{0.025}Eu_{0.025})₂SiO₄ or (Sr_{0.58}Ca_{0.36}Eu_{0.06})₂SiO₄ (with disclosure as preferred compositions (see page 8, line 32 – page 9, line 1) has not been found nor is said phosphor obvious over the prior art; the claimed ccx and ccy values are those corresponding to the phosphor (Sr_{0.58}Ca_{0.36}Eu_{0.06})₂SiO₄ (see page 12, line 39+ of the Specification) and have not been found in the prior art, nor have they been found obvious over the prior art.

2. **Claims 9-11, 22-24 and 41-42** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: strictly within the context of the invention as recited in independent claims 1, 14 and 40, the phosphor as otherwise claimed, specifically comprising either $\text{Sr}_{0.95}\text{Ba}_{0.025}\text{Eu}_{0.025}\text{SiO}_4$ or $(\text{Sr}_{0.58}\text{Ca}_{0.36}\text{Eu}_{0.06})_2\text{SiO}_4$ (the latter disclosed as preferred compositions (see page 8, line 32 – page 9, line 1)) has not been found nor is said phosphor obvious over the prior art; the claimed ccx and ccy values are those corresponding to the phosphor $(\text{Sr}_{0.58}\text{Ca}_{0.36}\text{Eu}_{0.06})_2\text{SiO}_4$ (see page 12, line 39+ of the Specification) and have not been found in the prior art, nor have they been found obvious over the prior art.

Conclusion

3. Applicant's amendment filed on 6/6/2007 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHANNES P. MONDT whose telephone number is (571)272-1919. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Johannes P Mondt/
Primary Examiner, Art Unit 3663